

### **Listing of Claims:**

1. (Currently Amended) A packet data transmission network system, comprising:  
a receiver (1); and  
a sender (2) for transmitting data packets to the receiver (1) through a packet data connection via a network element (3), the receiver being arranged to acknowledging each received data packet by an acknowledgment message containing header data comprising a window size, ~~the~~ a number of transmitted bytes for which the sender (2) has not received an acknowledgment from the receiver (1) being not allowed to exceed the window size;  
wherein said network element (3) is arranged to buffer data packets transmitted by the sender (2) ~~and~~, examine and modify the header data[[;]], ~~characterized in that said network element (3) is arranged to detect transmission conditions comprising~~ buffering conditions of data packets at said network element and radio conditions, and modify the window size accordingly.
2. (Currently Amended) The system according to claim 1, wherein said network element (3) is arranged to modify the window size to a lower value when ~~it~~ said network element detects a decreasing quality of transmission conditions.
3. (Currently Amended) The system according to claim 1, wherein said network element (3) is arranged to quit modifying the window size when ~~it~~ said network element detects that ~~the~~ a quality of transmission conditions is increasing and allow the receiver (1) to set the window size normally.
4. (Cancelled)
5. (Currently Amended) The system according to claim 1, wherein the packet data connection ~~is~~ comprises a TCP/IP connection.

6. (Currently Amended) The system according to claim 1, wherein said network element (3) is comprises an SGSN network element for performing header compression.

7. (Currently Amended) A network element (3) in a packet data transmission network system, comprising:

buffering means for buffering data packets transmitted by a sender (2) to a receiver (4) through a packet data connection, the receiver being arranged to acknowledge each received data packet by an acknowledgment message containing header data comprising a window size, ~~the~~ a number of transmitted bytes for which the sender (2) has not received an acknowledgment from the receiver (4) being not allowed to exceed the window size; ~~and~~

examining means for examining and modifying the header data;

~~characterized by~~

detecting means for detecting transmission conditions comprising buffering conditions of data packets at said network element and radio conditions; and

modifying means for modifying the window size according to the detected transmission conditions.

8. (Original) The network element according to claim 7, wherein said modifying means is arranged to modify the window size to a lower value when said detecting means detects a decreasing quality of transmission conditions.

9. (Currently Amended) The network element according to claim 7, wherein said modifying means is arranged to quit modifying the window size when said detecting means detects that ~~the~~ a quality of transmission conditions are increasing.

10. (Previously presented) The network element according to claim 7, wherein the transmission conditions detected by said detecting means comprise buffering conditions of data packets at said buffering means.

11. (Currently Amended) A packet data transmission method, comprising the steps of:

transmitting data packets from a sender (2) to a receiver (1) through a packet data connection via a network element (3), the receiver acknowledging each received data packet by an acknowledgment message containing header data comprising a window size, ~~the~~ a number of transmitted bytes for which the sender (2) has not received an acknowledgment from the receiver (1) being not allowed to exceed the window size; ~~and~~

buffering, in said network element (3), transmitted data packets and examining and modifying the header data; and

~~characterized by the step of:~~

detecting (S1, S2) transmission conditions comprising buffering conditions of data packets at said network element and radio conditions, and modifying (S3-S5) the window size accordingly.

12. (Currently Amended) The system according to claim 2, wherein said network element (3) is arranged to quit modifying the window size when it said network element detects that ~~the~~ a quality of transmission conditions is increasing and allow the receiver (1) to set the window size normally.

13. (Cancelled)

14. (Cancelled)

15. (Currently Amended) The system according to claim 2, wherein the packet data connection is comprises a TCP/IP connection.

16. (Currently Amended) The system according to claim 3, wherein the packet data connection is comprises a TCP/IP connection.

17. (Cancelled)

18. (Currently Amended) The system according to 2, wherein said network element ~~(3)~~ is comprises an SGSN network element for performing header compression.

19. (Currently Amended) The system according to 3, wherein said network element ~~(3)~~ is comprises an SGSN network element for performing header compression.

20. (Cancelled)

21. (Currently Amended) The system according to 5, wherein said network element ~~(3)~~ is comprises an SGSN network element for performing header compression.

22. (Cancelled)

23. (Previously presented) The network element according to claim 8, wherein said modifying means is arranged to quit modifying the window size when said detecting means detects that the quality of transmission conditions are increasing.

24. (Previously presented) The network element according to claim 8, wherein the transmission conditions detected by said detecting means comprise buffering conditions of data packets at said buffering means.

25. (Previously presented) The network element according to claim 9, wherein the transmission conditions detected by said detecting means comprise buffering conditions of data packets at said buffering means.